

ABSTRACT

Methods, compositions and apparatus (e.g., test kits, test systems, reagents, related computer software, calculators, etc.) for pre-symptomatic or post-symptomatic diagnosis of Alzheimer's Disease or other disorders associated with the formation of β -amyloid deposits (e.g., plaques) and/or β -amyloid fibrils. Also, methods, compositions and apparatus assessing the efficacy of treatments for such disorders. Sample cells, tissue or body fluid are obtained from a human or animal subject and analyzed to determine whether or to what extent certain mitochondrial DNA control region (mtDNA CR). Significantly elevated numbers of these mtDNA CR mutations may indicate that the subject suffers from, or is at increased risk for development of, Alzheimer's Disease or other disorders associated with the formation of β -amyloid deposits (e.g., plaques) and/or β -amyloid fibrils. A significant decrease in the numbers of these mtDNA CR mutations during treatment for the disorder may indicate that the treatment is effective.